

§ 22.159

(d) Calculate the number of kilometers per degree of longitude difference for the mean geodetic latitude calculated in paragraph (b) of this section as follows:

$$\begin{aligned} \text{KPD}_{\text{lon}} = & 111.41513 \cos \text{ML} \\ & - 0.09455 \cos 3\text{ML} \\ & + 0.00012 \cos 5\text{ML} \end{aligned}$$

(e) Calculate the North-South distance in kilometers as follows:

$$\text{NS} = \text{KPD}_{\text{lat}} \times (\text{LAT1}_{\text{dd}} - \text{LAT2}_{\text{dd}})$$

(f) Calculate the East-West distance in kilometers as follows:

$$\text{EW} = \text{KPD}_{\text{lon}} \times (\text{LON1}_{\text{dd}} - \text{LON2}_{\text{dd}})$$

(g) Calculate the distance between the locations by taking the square root of the sum of the squares of the East-West and North-South distances:

$$\text{DIST} = \sqrt{\text{NS}^2 + \text{EW}^2}$$

(h) Terms used in this section are defined as follows:

(1) LAT1_{dd} and LON1_{dd} are the coordinates of the first location in degree-decimal format.

(2) LAT2_{dd} and LON2_{dd} are the coordinates of the second location in degree-decimal format.

(3) ML is the mean geodetic latitude in degree-decimal format.

(4) KPD_{lat} is the number of kilometers per degree of latitude at a given mean geodetic latitude.

(5) KPD_{lon} is the number of kilometers per degree of longitude at a given mean geodetic latitude.

(6) NS is the North-South distance in kilometers.

(7) DIST is the distance between the two locations, in kilometers.

§ 22.159 Computation of average terrain elevation.

Average terrain elevation must be calculated by computer using elevations from a 30 second point or better topographic data file. The file must be identified. If a 30 second point data file is used, the elevation data must be processed for intermediate points using interpolation techniques; otherwise, the nearest point may be used. In cases

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of dispute, average terrain elevation determinations can also be done manually, if the results differ significantly from the computer derived averages.

(a) Radial average terrain elevation is calculated as the average of the elevation along a straight line path from 3 to 16 kilometers (2 and 10 miles) extending radially from the antenna site. If a portion of the radial path extends over foreign territory or water, such portion must not be included in the computation of average elevation unless the radial path again passes over United States land between 16 and 134 kilometers (10 and 83 miles) away from the station. At least 50 evenly spaced data points for each radial should be used in the computation.

(b) Average terrain elevation is the average of the eight radial average terrain elevations (for the eight cardinal radials).

(c) For locations in Dade and Broward Counties, Florida, the method prescribed above may be used or average terrain elevation may be assumed to be 3 meters (10 feet).

§ 22.161 Application requirements for ASSB.

Applications for base stations employing amplitude companded single sideband modulation (ASSB) must contain the following information:

(a) The application must describe fully the modulation characteristics, emission and occupied bandwidth, and specify the center frequency of the emission for each channel, carrier frequency, and pilot channels, if any. The emission must fall completely within a channel assignable for two-way operation in the Paging and Radiotelephone Service, Rural Radiotelephone Service or Offshore Radiotelephone Service.

(b) The application must contain interference studies between stations within an authorized bandwidth, whether FM-to-ASSB, ASSB-to-FM, or ASSB-to-ASSB in accordance with the following: For ASSB stations, the transmitter nearest to the protected station must be used. The effective radiated power in the direction of the protected station must be the sum of the peak effective radiated power of all